


Appln. No. 10/076,472
Amendment dated October 7, 2003
Reply to Office Action mailed August 13, 2003

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims (deleted text being struck through and added text being underlined):

1. (Currently Amended) A wheelchair apparatus for permitting a user to propel ~~themselves~~ himself/herself through arm movement, the wheelchair apparatus comprising:



a chair member being adapted for supporting the user, said chair member having a seat portion, said seat portion being adapted for receiving the user when the user is sitting on said chair member, said chair member having a frame portion, said chair member having at least one drive wheel, said drive wheel being rotatably coupled to said frame portion such that said drive wheel is adapted for being actuated by the user for propelling said chair member along a support surface, said chair member having at least one support wheel, said support wheel being coupled to said frame portion, said support wheel being adapted for permitting said chair member to roll along the support surface; and

at least one lever assembly being operationally coupled to said drive wheel, said lever assembly being coupled to said chair member, said lever assembly ~~being for~~ rotating said drive wheel for propelling said chair member across the support surface when said lever assembly is actuated by the user;

said lever assembly having a lever member, said lever member being pivotally coupled to said frame portion of said chair member, said lever assembly having a cable member being coupled between said lever member and said drive wheel of said chair member, said cable member rotating said

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drive wheel of said chair member for propelling said chair member forward when said lever member is actuated by the user;

a clutching means being for permitting rotation of said drive wheel in a direction to propel said chair member forward, said clutching means being coupled between said cable member of said lever assembly and said drive wheel of said chair member, said clutching means engaging said drive wheel when said lever member of said lever assembly is pushed forward drawing said cable member away from said drive wheel for rotating said drive wheel, said clutching means disengaging said drive wheel when said cable member slackens when said lever member is drawn back; and

a clutch biasing member being coupled to said clutching means, said clutch biasing member being positioned in a tensed state when said clutching means is rotated by said cable member, said clutch biasing member recoiling from said tensed state for rotating said clutching means for winding said cable member onto said clutching means when said lever member is drawn back by the user.

2. (Cancelled) ~~The wheelchair apparatus as set forth in claim 1, further comprising:~~

~~said lever assembly having a lever member, said lever member being pivotally coupled to said frame portion of said chair member, said lever assembly having a cable member being coupled between said lever member and said drive wheel of said chair member, said cable member being for rotating said drive wheel of said chair member for propelling said chair member forward when said lever member is actuated by the user.~~

3. (Cancelled) ~~The wheelchair apparatus as set forth in claim 2, further comprising:~~

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~~a clutching means being for permitting rotation of said drive wheel in a direction to propel said chair member forward, said clutching means being coupled between said cable member of said lever assembly and said drive wheel of said chair member, said clutching means engaging said drive wheel when said lever member of said lever assembly is pushed forward drawing said cable member away from said drive wheel for rotating said drive wheel, said clutching means disengaging said drive wheel when said cable member slackens when said lever member is drawn back.~~

4. (Cancelled) ~~The wheelchair apparatus as set forth in claim 3, further comprising:~~

~~a clutch biasing member being coupled to said clutching means, said clutch biasing member being positioned in a tensed state when said clutching means is rotated by said cable member, said clutch biasing member recoiling from said tensed state for rotating said clutching means for winding said cable member onto said clutching means when said lever member is drawn back by the user.~~

5. (Currently Amended) The wheelchair apparatus as set forth in claim 2 1, further comprising:

said lever assembly having a gearing coupler, said gearing coupler being coupled to said cable member, said gearing coupler being slidably coupled to said lever member such that said gearing coupler is slidable along a portion of a length of said lever member for changing the length through which said cable member is drawn.

6. (Original) The wheelchair apparatus as set forth in claim 5, further comprising:

said gearing coupler having a sleeve portion, said sleeve portion having an aperture extending through said sleeve portion, said lever arm

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extending through said aperture of said sleeve portion of said gearing coupler such that said sleeve portion slidably engages said lever arm.

7. (Currently Amended) The wheelchair apparatus as set forth in claim 6, further comprising:

said gearing coupler having an arcuate plate, said arcuate plate being slidably positioned in said aperture of said sleeve portion of said gearing coupler, said arcuate plate ~~being for~~ maintaining pressure against said lever member for inhibiting inadvertent sliding of said gearing coupler with respect to said lever member when said lever member is being actuated by the user.

8. (Original) The wheelchair apparatus as set forth in claim 7, further comprising:

said gearing coupler having a plate biasing member, said plate biasing member being positioned between said arcuate plate and a rear wall of said sleeve portion, said plate biasing member being for biasing said arcuate plate against said lever member for maintaining contact between said lever member and said arcuate plate of said gearing coupler.

9. (Original) The wheelchair apparatus as set forth in claim 5, further comprising:

said lever member of said lever assembly having a plurality of stopping nubs, said stopping nubs being spaced along a portion of said length of said lever member such that said gearing coupler is selectively positionable between an adjacent pair of said stopping nubs, each of said stopping nubs being for inhibiting inadvertent sliding of said gearing coupler along said length of said lever member.

10. (Currently Amended) The wheelchair apparatus as set forth in claim 2 1, further comprising:

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said lever assembly having a handle portion, said handle portion being coupled to said lever member, said handle portion being adapted for being engaged by a hand of the user for providing a gripping surface for the hand of the user.

11. (Currently Amended) The wheelchair apparatus as set forth in claim 2 1, further comprising:

a gearing assembly being coupled said frame of said chair, said gearing assembly being operationally coupled to said cable member of said lever assembly such that said gearing assembly is for changing a draw length of said cable member when said lever member is actuated by the user.

12. (Currently Amended) The wheelchair apparatus as set forth in claim 11, further comprising:

said gearing assembly having a housing, said housing being coupled to said frame portion of said chair member; and

said gearing assembly having a positional member, said positional member being operationally coupled to said cable member of said lever assembly, said positional member being slidably coupled to an arm of said housing such that said positional member is positionable along a portion of a length of said arm of said housing for changing the length said cable member ~~is drawn~~ is pulled to rotate said drive wheel when said lever member is actuated by the user.

13. (Original) The wheelchair apparatus as set forth in claim 12, further comprising:


said gearing assembly having a motor, said motor being positioned within said housing, said motor being operationally coupled to said positional member such that said motor is for moving said positional member along said portion of said length of said arm of said housing.

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14. (Currently Amended) The wheelchair apparatus as set forth in claim 14 13, further comprising:

said gearing assembly having a processing assembly and a sensor member, said processing assembly being operationally coupled to said motor, said sensor member being operationally coupled between said drive wheel and said processing assembly, said sensor member being for sensing a rotational speed of said drive wheel such that said processing assembly actuates said motor to position said positional member for maintaining a substantially consistent speed.

15. (Cancelled) ~~A wheelchair apparatus for permitting a user to propel themselves through arm movement, the wheelchair apparatus comprising:~~

 ~~a chair member being adapted for supporting the user, said chair member having a seat portion, said seat portion being adapted for receiving the user when the user is sitting on said chair member, said chair member having a frame portion, said chair member having at least one drive wheel, said drive wheel being rotatably coupled to said frame portion such that said drive wheel is adapted for being actuated by the user for propelling said chair member along a support surface, said chair member having at least one support wheel, said support wheel being coupled to said frame portion, said support wheel being adapted for permitting said chair member to roll along the support surface;~~


~~at least one lever assembly being operationally coupled to said drive wheel, said lever assembly being coupled to said chair member, said lever assembly being for rotating said drive wheel for propelling said chair member across the support surface when said lever assembly is actuated by the user;~~

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~~said lever assembly having a lever member, said lever member being pivotally coupled to said frame portion of said chair member, said lever assembly having a cable member being coupled between said lever member and said drive wheel of said chair member, said cable member being for rotating said drive wheel of said chair member for propelling said chair member forward when said lever member is actuated by the user;~~

 ~~a clutching means being for permitting rotation of said drive wheel in a direction to propel said chair member forward, said clutching means being coupled between said cable member of said lever assembly and said drive wheel of said chair member, said clutching means engaging said drive wheel when said lever member of said lever assembly is pushed forward drawing said cable member away from said drive wheel for rotating said drive wheel, said clutching means disengaging said drive wheel when said cable member slackens when said lever member is drawn back;~~

~~a clutch biasing member being coupled to said clutching means, said clutch biasing member being positioned in a tensed state when said clutching means is rotated by said cable member, said clutch biasing member recoiling from said tensed state for rotating said clutching means for winding said cable member onto said clutching means when said lever member is drawn back by the user;~~

~~said lever assembly having a gearing coupler, said gearing coupler being coupled to said cable member, said gearing coupler being slidably coupled to said lever member such that said gearing coupler is slidable along a portion of a length of said lever member for changing the length through which said cable member is drawn;~~

~~said gearing coupler having a sleeve portion, said sleeve portion having an aperture extending through said sleeve portion, said lever arm~~

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~~extending through said aperture of said sleeve portion of said gearing coupler such that said sleeve portion slidably engages said lever arm;~~

~~said gearing coupler having an arcuate plate, said arcuate plate being slidably positioned in said aperture of said sleeve portion of said gearing coupler, said arcuate plate being for maintaining pressure against said lever member for inhibiting inadvertent sliding of said gearing coupler with respect to said lever member when said lever member is being actuated by the user;~~

~~said gearing coupler having a plate biasing member, said plate biasing member being positioned between said arcuate plate and a rear wall of said sleeve portion, said plate biasing member being for biasing said arcuate plate against said lever member for maintaining contact between said lever member and said arcuate plate of said gearing coupler; and~~

~~said lever assembly having a handle portion, said handle portion being coupled to said lever member, said handle portion being adapted for being engaged by a hand of the user for providing a gripping surface for the hand of the user.~~

New Claims:

16. (New) A wheelchair apparatus for permitting a user to propel himself/herself through arm movement, the wheelchair apparatus comprising:

a chair member being adapted for supporting the user, said chair member having a seat portion, said seat portion being adapted for receiving the user when the user is sitting on said chair member, said chair member having a frame portion, said chair member having at least one drive wheel, said drive wheel being rotatably coupled to said frame portion such that said

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drive wheel is adapted for being actuated by the user for propelling said chair member along a support surface, said chair member having at least one support wheel, said support wheel being coupled to said frame portion, said support wheel being adapted for permitting said chair member to roll along the support surface;

at least one lever assembly being operationally coupled to said drive wheel, said lever assembly being coupled to said chair member, said lever assembly rotating said drive wheel for propelling said chair member across the support surface when said lever assembly is actuated by the user;

Q said lever assembly having a lever member, said lever member being pivotally coupled to said frame portion of said chair member, said lever assembly having a cable member being coupled between said lever member and said drive wheel of said chair member, said cable member rotating said drive wheel of said chair member for propelling said chair member forward when said lever member is actuated by the user; and

said lever assembly having a gearing coupler, said gearing coupler being coupled to said cable member, said gearing coupler being slidably coupled to said lever member such that said gearing coupler is slidable along a portion of a length of said lever member for changing the length through which said cable member is drawn.

17. (New) The wheelchair apparatus as set forth in claim 16, further comprising:

said gearing coupler having a sleeve portion, said sleeve portion having an aperture extending through said sleeve portion, said lever arm extending through said aperture of said sleeve portion of said gearing coupler such that said sleeve portion slidably engages said lever arm.

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18. (New) The wheelchair apparatus as set forth in claim 17, further comprising:

said gearing coupler having an arcuate plate, said arcuate plate being slidably positioned in said aperture of said sleeve portion of said gearing coupler, said arcuate plate maintaining pressure against said lever member for inhibiting inadvertent sliding of said gearing coupler with respect to said lever member when said lever member is being actuated by the user.

19. (New) The wheelchair apparatus as set forth in claim 18, further comprising:

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said gearing coupler having a plate biasing member, said plate biasing member being positioned between said arcuate plate and a rear wall of said sleeve portion, said plate biasing member being for biasing said arcuate plate against said lever member for maintaining contact between said lever member and said arcuate plate of said gearing coupler.

20. (New) The wheelchair apparatus as set forth in claim 16, further comprising:

said lever member of said lever assembly having a plurality of stopping nubs, said stopping nubs being spaced along a portion of said length of said lever member such that said gearing coupler is selectively positionable between an adjacent pair of said stopping nubs, each of said stopping nubs being for inhibiting inadvertent sliding of said gearing coupler along said length of said lever member.

21. (New) A wheelchair apparatus for permitting a user to propel himself/herself through arm movement, the wheelchair apparatus comprising:

a chair member being adapted for supporting the user, said chair member having a seat portion, said seat portion being adapted for receiving

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the user when the user is sitting on said chair member, said chair member having a frame portion, said chair member having at least one drive wheel, said drive wheel being rotatably coupled to said frame portion such that said drive wheel is adapted for being actuated by the user for propelling said chair member along a support surface, said chair member having at least one support wheel, said support wheel being coupled to said frame portion, said support wheel being adapted for permitting said chair member to roll along the support surface;

at least one lever assembly being operationally coupled to said drive wheel, said lever assembly being coupled to said chair member, said lever assembly rotating said drive wheel for propelling said chair member across the support surface when said lever assembly is actuated by the user;

said lever assembly having a lever member, said lever member being pivotally coupled to said frame portion of said chair member, said lever assembly having a cable member being coupled between said lever member and said drive wheel of said chair member, said cable member rotating said drive wheel of said chair member for propelling said chair member forward when said lever member is actuated by the user; and

a gearing assembly being coupled said frame of said chair, said gearing assembly being operationally coupled to said cable member of said lever assembly such that said gearing assembly is for changing a draw length of said cable member when said lever member is actuated by the user.

22. (New) The wheelchair apparatus as set forth in claim 21, further comprising:

said gearing assembly having a housing, said housing being coupled to said frame portion of said chair member; and


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said gearing assembly having a positional member, said positional member being operationally coupled to said cable member of said lever assembly, said positional member being slidably coupled to an arm of said housing such that said positional member is positionable along a portion of a length of said arm of said housing for changing the length said cable member is pulled to rotate said drive wheel when said lever member is actuated by the user.

23. (New) The wheelchair apparatus as set forth in claim 22, further comprising:

 said gearing assembly having a motor, said motor being positioned within said housing, said motor being operationally coupled to said positional member such that said motor is for moving said positional member along said portion of said length of said arm of said housing.

24. (New) The wheelchair apparatus as set forth in claim 23, further comprising:

said gearing assembly having a processing assembly and a sensor member, said processing assembly being operationally coupled to said motor, said sensor member being operationally coupled between said drive wheel and said processing assembly, said sensor member being for sensing a rotational speed of said drive wheel such that said processing assembly actuates said motor to position said positional member for maintaining a substantially consistent speed.
